

**KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT
DIVISION OF ENVIRONMENT POLICY**

related to

VERTICAL EXPANSIONS AT MUNICIPAL SOLID WASTE LANDFILLS

June 6, 1997

(revised October 10, 1997)

Background

The State of Kansas is fully authorized by the U.S. Environmental Protection Agency to administer the federal municipal solid waste (MSW) permitting program established pursuant to Subtitle D of the Resource Conservation and Recovery Act (RCRA). Kansas regulations have been adopted which specify all required location, design, and operating requirements for MSW landfills. These state regulations have been found by EPA to be substantially equivalent to the federal regulations. K.A.R. 28-29-104 addresses landfill design including provisions for vertically expanding pre-Subtitle D landfills. In Kansas, pre-Subtitle D landfills do not contain multi-layer composite liners and leachate collection systems.

"Vertical expansion" is defined in state regulations as "an increase in the design capacity of an existing unit by raising the final elevation of the unit." Existing units not filled to their permitted capacity, or elevation, on October 9, 1996 were also subject to the vertical expansion requirements, if waste disposal continued beyond that date. The vertical expansion requirements do not apply to small "exempt" landfills which satisfy the criteria specified in K.A.R. 28-29-103.

The Kansas landfill design regulations were developed with assistance from the State Solid Waste Advisory Group to minimize the need for vertical expansions by allowing a three-year transition period from October 9, 1993 to October 9, 1996. Existing unlined disposal cells could continue to be used during this time period even though all other aspects of the Subtitle D regulatory program applied. It was believed that three years was an adequate time to complete the use of existing units and design and build new lined cells. However, the vertical expansion provision was believed necessary to assure that every site could be brought to the most desirable elevation and grades before the final cap was constructed. Optimal final grades will allow for good stormwater drainage and less problems associated with long-term maintenance of a closed site. It was also recognized that some locations could have trouble siting a new landfill on or before October 9, 1996, so the vertical expansion provision adds flexibility to deal with those possibilities.

Kansas Vertical Expansions

Several Kansas landfills took advantage of the vertical expansion provision within the regulation. Some permit holders applied for a vertical expansion well in advance of the October 9, 1996 deadline. Others made their requests shortly before the deadline was reached. About one half of the landfills in Kansas which are subject to the liner standards specified in Subtitle D received KDHE approval to vertically expand over an old "pre-Subtitle D" disposal cell. The other half made the transition into lined disposal areas during that three-year period.

Department Philosophy

In 1992 and 1993, many cities, counties, and private companies which owned or operated non-exempt landfills were faced with decisions to either upgrade their facilities or close them. Most of the affected landfills closed, particularly in eastern Kansas where the small landfill exemption

was not an available option due to precipitation rates which exceeded the allowable 25 inches per year. Several other landfills embarked upon an aggressive schedule to design and construct new disposal cells which satisfied the new Subtitle D standards. These efforts and expenditures took place to comply with the intent of the regulations and to provide safer facilities to dispose of municipal solid waste.

The Kansas regulatory program offered a great deal of flexibility to operate in existing units beyond the federal regulatory deadline of October 9, 1993. The three-year transition window and the standard five-year vertical expansions granted by the department yield a total of eight years to establish lined cells or close existing facilities. This extensive time period was designed to facilitate an orderly transition into the new generation of Kansas landfills. It was not meant to prolong disposal in old unlined facilities which pose greater environmental risks; nor was it meant to maintain lower long-term disposal costs compared to those facilities which complied with the statutory and regulatory intent of the liner requirement.

Conclusions

K.A.R. 28-29-104 (a) allows permit holders to request extensions of their vertical expansion approvals past the initial five year period. Based upon the objective of the vertical expansion provisions and the universe of facilities which may take advantage of this opportunity, the Department of Health and Environment is establishing a policy to closely scrutinize any future requests for vertical expansions over unlined waste disposal cells beyond those already approved. The economic benefits gained from continued operations of an unlined landfill are not sufficient cause to justify an extension of a vertical expansion. The cost of solid waste disposal has increased with the advent of Subtitle D, but such increased expenditures which resulted from the requirements of federal regulations are necessary to protect human health and the environment. In order for KDHE to consider a request for an extension, reasons other than economics or additional available volume over an unlined area must exist which would preclude the development of a lined Subtitle D landfill or transfer to such a facility. In addition, extensions will only be granted for landfills which can successfully demonstrate continued operations will not adversely affect human health and the environment. Such a demonstration would include documentation that no groundwater contamination is present at the site and that the site is in a secure geologic setting. The landfill must also be in compliance with groundwater monitoring and operational requirements in order to be granted an additional extension. KDHE has prepared a decision tree to determine the acceptability of a site for continued vertical expansion. By issuing this policy at this time, every facility which could not qualify for an additional extension under these provisions has ample time to complete the planning, design, and construction to make the transition into a lined cell before the expiration of their current vertical expansion approval.

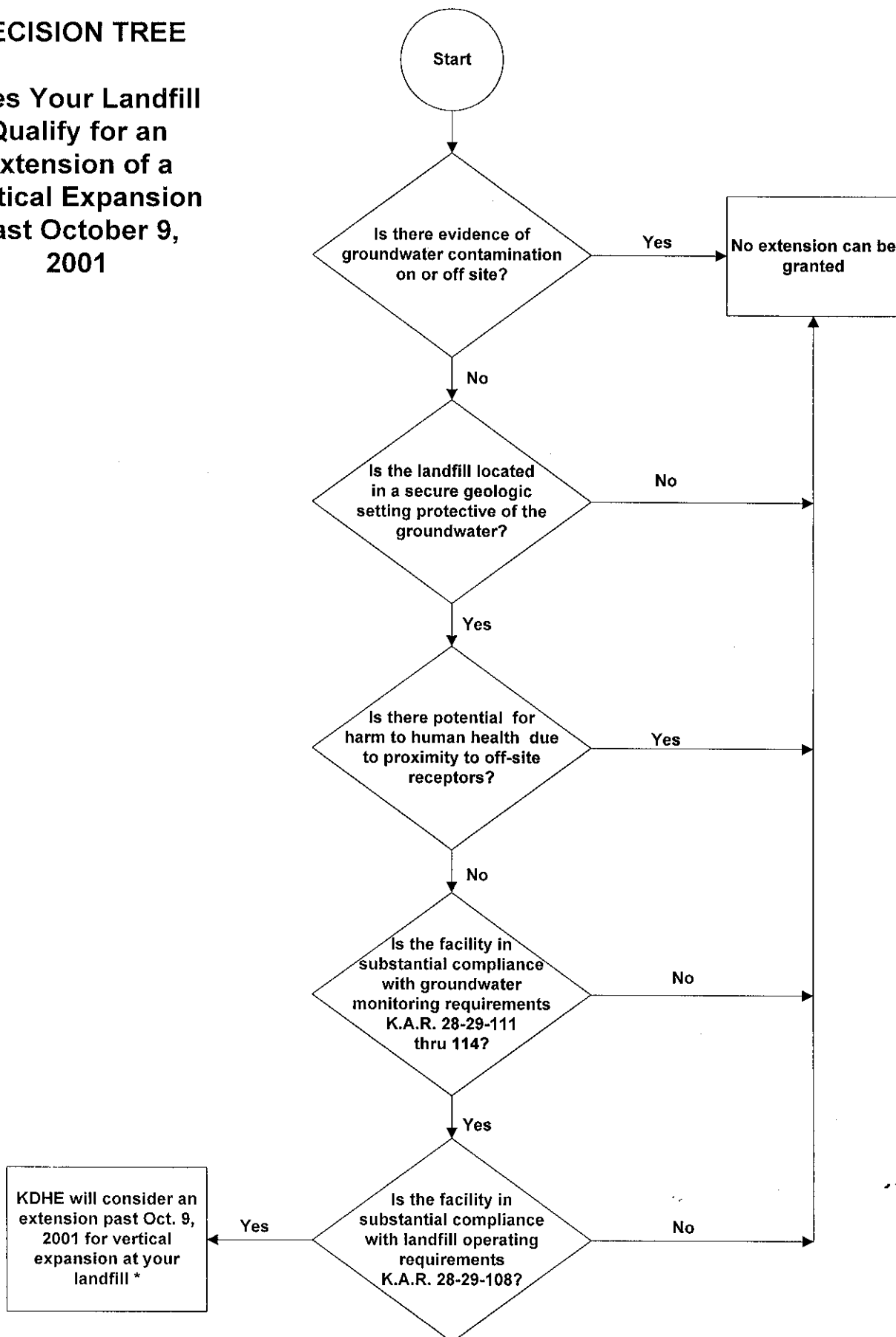
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Ronald F. Hammerschmidt, Ph.D
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Gary R. Mitchell
Secretary

DECISION TREE

**Does Your Landfill
Qualify for an
Extension of a
Vertical Expansion
past October 9,
2001**



* NOTE: Failure of any of these criteria would prohibit the extension to the vertical expansion. In addition, for consideration, sound reasons for the extension must exist such as the failure of the landfill to achieve the final grades established in the original permit.